**Expert ID/Name: Nstructive**

**Date: 10-Nov-2020**

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| Answer for Short / Simple / Direct Question |

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| **Tips:**  . Convert the given condition into differential equation.  . |

**Answer:**

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| Given: The rate of grows per year is.  To find: The time to take the population is double.  Explanation: -  Step1:   |  |  | | --- | --- | | Instruction: | Convert the given condition into differential equation. | | Calculation: | Let be the initial population and be the population after  years. |   Step 2:   |  |  | | --- | --- | | Instruction: | Integrate on both sides with respect to . | | Calculation: | Now, at |   Step 3:   |  |  | | --- | --- | | Instruction: | Assume that years be the required time to make the population is double. | | Calculation: |  | |
| Verified Answer: - The time to take the population is double is .  Hence verified. |